

**Carprofen Tablets** Although not all adverse reactions are reported, the following adverse reactions are based on voluntary post-approval adverse drug experience reporting. The categories of adverse reactions are listed in decreasing order of frequency by Non-steroidal anti-inflammatory drug gastrointestinal bleeding, pancreatitis. Hepatic: Inappetence, vomiting, jaundice, acute hepatic toxicity, hepatic enzyme elevation, abnormal liver function test(s), For oral use in dogs only hyperbilirubinemia, bilirubinuria, hypoalbuminemia. Approximately one-fourth of hepatic reports were in Labrador Retriever CAUTION: Federal law restricts this drug to use by or on the order of a licensed veterinarian Neurologic: Ataxia, paresis, paralysis, seizures, vestibular signs, disorientation. **DESCRIPTION:** Carprofen Tablets are a non-steroidal anti-inflammatory drug (NSAID) of the propionic acid class that Urinary: Hematuria, polyuria, polydipsia, urinary incontinence, urinary tract infection, azotemia, acute renal failure includes ibuprofen, naproxen, and ketoprofen. Carprofen is the nonproprietary designation for a substituted carbazole, tubular abnormalities including acute tubular necrosis, renal tubular acidosis, glucosuria.  $6\text{-chloro-}\alpha\text{-methyl-9H-carbazole-2-acetic acid.} The \ empirical \ formula \ is \ C_{15}H_{12}\text{CINO}_2 \ and \ the \ molecular \ weight 273.72.$ Behavioral: Sedation, lethargy, hyperactivity, restlessness, aggressiveness. he chemical structure of carprofen is: Hematologic: Immune-mediated hemolytic anemia, immune-mediated thrombocytopenia, blood loss anemia, epistaxis. Dermatologic: Pruritus, increased shedding, alopecia, pyotraumatic moist dermatitis (hot spots), Immunologic or hypersensitivity: Facial swelling, hives, erythema. In rare situations, death has been associated with some of the adverse reactions listed above. To report suspected adverse drug events, for technical assistance or to obtain a copy of the Safety Data Sheet, contact Dechra at 1-866-933-2472. For additional information about adverse drug experience reporting for animal drugs, conta DOSAGE AND ADMINISTRATION: Always provide Client Information Sheet with prescription. Carefully consider the potential benefits and risk of Carprofen Tablets and other treatment options before deciding to use Carprofen Tablets. Use the lowest CLINICAL PHARMACOLOGY: Carprofen is a non-narcotic, non-steroidal anti-inflammatory agent with characteristic analgesic and antipyretic activity approximately equipotent to indomethacin in animal models effective dose for the shortest duration consistent with individual response. The recommended dosage for oral administration to dogs is 2 mg/lb (4.4 mg/kg) of body weight daily. The total daily dose may be administered as 2 mg/lb of The mechanism of action of carprofen, like that of other NSAIDs, is believed to be associated with the inhibition of body weight once daily or divided and administered as 1 mg/lb (2.2 mg/kg) twice daily. For the control of postoperative cyclooxygenase activity. Two unique cyclooxygenases have been described in mammals. The constitutive cyclooxygenase COX-1, synthesizes prostaglandins necessary for normal gastrointestinal and renal function. The inducible cyclooxygenase pain, administer approximately 2 hours before the procedure. Caplets are scored and dosage should be calculated in COX-2, generates prostaglandins involved in inflammation. Inhibition of COX-1 is thought to be associated with **EFFECTIVENESS:** Confirmation of the effectiveness of carprofen tablets for the relief of pain and inflammation associated gastrointestinal and renal toxicity while inhibition of COX-2 provides anti-inflammatory activity. The specificity of a with osteoarthritis, and for the control of postoperative pain associated with soft tissue and orthopedic surgeries was particular NSAID for COX-2 versus COX-1 may vary from species to species.3 In an in vitro study using canine cell cultures demonstrated in 5 placebo-controlled, masked studies examining the anti-inflammatory and analgesic effectiveness of carprofen demonstrated selective inhibition of COX-2 versus COX-1.4 Clinical relevance of these data has not been shown. Carprofen has also been shown to inhibit the release of several prostaglandins in two inflammatory cell systems: rat polymorphonuclear leukocytes (PMN) and human rheumatoid synovial cells, indicating inhibition of acute (PMN system) Separate placebo-controlled, masked, multicenter field studies confirmed the anti-inflammatory and analgesic effectiveness and chronic (synovial cell system) inflammatory reactions.1 carprofen tablets when dosed at 2 mg/lb once daily or when divided and administered at 1 mg/lb twice daily. In these Several studies have demonstrated that carprofen has modulatory effects on both humoral and cellular immune responses.<sup>5</sup> two field studies, dogs diagnosed with osteoarthritis showed statistically significant overall improvement based on meness evaluations by the veterinarian and owner observations when administered carprofen tablets at labeled doses Data also indicate that carprofen inhibits the production of osteoclast-activating factor (OAF), PGE<sub>1</sub>, and PGE<sub>2</sub> by its Separate placebo-controlled, masked, multicenter field studies confirmed the effectiveness of carprofen tablets for the Based upon comparison with data obtained from intravenous administration, carprofen is rapidly and nearly completely control of postoperative pain when dosed at 2 mg/lb once daily in various breeds of dogs. In these studies, dogs presented absorbed (more than 90% bioavailable) when administered or ally.  $^{10}$  Peak blood plasma concentrations are achieved in for ovariohysterectomy, cruciate repair and aural surgeries were administered carprofen tablets preoperatively and for a maximum of 3 days (soft tissue) or 4 days (orthopedic) postoperatively. In general, dogs administered carprofen tablets 1-3 hours after oral administration of 1, 5, and 25 mg/kg to dogs. The mean terminal half-life of carprofen is approximate showed statistically significant improvement in pain scores compared to controls. ntravenous bolus dose, the mean elimination half-life was approximately 11.7 hours in the dog. Carprofen is more than ANIMAL SAFETY: Laboratory studies in unanesthetized dogs and clinical field studies have demonstr 99% bound to plasma protein and exhibits a very small volume of distribution tablets are well tolerated in dogs after oral administration. Carprofen is eliminated in the dog primarily by biotransformation in the liver followed by rapid excretion of the resulting In target animal safety studies, carprofen tablets were administered orally to healthy Beagle dogs at 1, 3, and 5 mg/lb metabolites (the ester glucuronide of carprofen and the ether glucuronides of 2 phenolic metabolites, 7-hydroxy carprofen twice daily (1, 3 and 5 times the recommended total daily dose) for 42 consecutive days with no significant adverse reactions. Serum albumin for a single female dog receiving 5 mg/lb twice daily decreased to 2.1 g/dL after 2 weeks of and 8-hydroxy carprofen) in the feces (70-80%) and urine (10-20%). Some enterohepatic circulation of the drug is observed INDICATIONS: Carprofen Tablets are indicated for the relief of pain and inflammation associated with osteoarthritis and for treatment, returned to the pre-treatment value (2.6 g/dL) after 4 weeks of treatment, and was 2.3 g/dL at the final 6-week evaluation. Over the 6-week treatment period, black or bloody stools were observed in 1 dog (1 incident) treated with the control of postoperative pain associated with soft tissue and orthopedic surgeries in dogs. 1 mg/lb twice daily and in 1 dog (2 incidents) treated with 3 mg/lb twice daily. Redness of the colonic mucosa was CONTRAINDICATIONS: Carprofen Tablets should not be used in dogs exhibiting previous hypersensitivity to carprofen observed in 1 male that received 3 mg/lb twice daily. WARNINGS: Keep out of reach of children. Not for human use. Consult a physician in cases of accidental ingestion by Two of 8 dogs receiving 10 mg/lb orally twice daily (10 times the recommended total daily dose) for 14 days exhibited humans. For use in dogs only. Do not use in cats. hypoalbuminemia. The mean albumin level in the dogs receiving this dose was lower (2.38 g/dL) than each of 2 placebo All dogs should undergo a thorough history and physical examination before initiation of NSAID therapy. Appropriate control groups (2.88 and 2.93 g/dL, respectively). Three incidents of black or bloody stool were observed in 1 dog. Five of laboratory tests to establish hematological and serum biochemical baseline data prior to, and periodically during. 8 dogs exhibited reddened areas of duodenal mucosa on gross pathologic examination. Histologic examination of these administration of any NSAID should be considered. Owners should be advised to observe for signs of potential drug areas revealed no evidence of ulceration, but did show minimal congestion of the lamina propria in 2 of the 5 dogs. toxicity (see Information for Dog Owners, Adverse Reactions, Animal Safety and Post-Approval Expe In separate safety studies lasting 13 and 52 weeks, respectively, dogs were administered orally up to 11.4 mg/lb/day PRECAUTIONS: As a class, cyclooxygenase inhibitory NSAIDs may be associated with gastrointestinal, renal and hepatic toxicity. Effects may result from decreased prostaglandin production and inhibition of the enzyme cyclopxygenase which is by all of the animals. No gross or histologic changes were seen in any of the treated animals. In both studies, dogs receiving esponsible for the formation of prostaglandins from arachidonic acid. 11-14 When NSAIDs inhibit prostaglandins that cause the highest doses had average increases in serum L-alanine aminotransferase (ALT) of approximately 20 IU. flammation they may also inhibit those prostaglandins which maintain normal homeostatic function. These anti-prostaglandi In the 52 week study, minor dermatologic changes occurred in dogs in each of the treatment groups but not in the control effects may result in clinically significant disease in patients with underlying or pre-existing disease more often than in dogs. The changes were described as slight redness or rash and were diagnosed as non-specific dermatitis. The possibility exists that these mild lesions were treatment related, but no dose relationship was observed. absence of apparent clinical signs. Patients with underlying renal disease for example, may experience exacerbation of Clinical field studies were conducted with 549 dogs of different breeds at the recommended oral doses for 14 days decompensation of their renal disease while on NSAID therapy. 11-14 The use of parenteral fluids during surgery should be (297 dogs were included in a study evaluating 1 mg/lb twice daily and 252 dogs were included in a separate study considered to reduce the potential risk of renal complications when using NSAIDs perioperative evaluating 2 mg/lb once daily). In both studies the drug was clinically well tolerated and the incidence of clinical adverse Carprofen is an NSAID, and as with others in that class, adverse reactions may occur with its use. The most frequently reactions for carprofen tablets-treated animals was no higher than placebo-treated animals (placebo contained inactive dients found in carprofen tablets). For animals receiving 1 mg/lb twice daily, the mean post-treatment serum and hepatic effects have also been reported. Patients at greatest risk for renal toxicity are those that are dehydrated, on nitant diuretic therapy, or those with renal, cardiovascular, and/or hepatic dysfunction. Concurrent administration of respectively. Differences were not statistically significant. For animals receiving 2 mg/lb once daily, the mean potentially nephrotoxic drugs should be approached cautiously, with appropriate monitoring. Concomitant use of Carprofen post-treatment serum ALT values were 4.5 IU greater and 0.9 IU less than pre-treatment values for dogs receiving Tablets with other anti-inflammatory drugs, such as other NSAIDs or corticosteroids, should be avoided because of the carprofen tablets and placebo, respectively. In the latter study, 3 carprofen tablets-treated dogs developed a 3-fold o potential increase of adverse reactions, including gastrointestinal ulcerations and/or perforations. Sensitivity to greater increase in (ALT) and/or (AST) during the course of therapy. One placebo-treated dog had a greater than 2-fold drug-associated adverse reactions varies with the individual patient. Dogs that have experienced adverse reactions from crease in ALT. None of these animals showed clinical signs associated with laboratory value changes. Changes in the clinical laboratory values (hematology and clinical chemistry) were not considered clinically significant. The 1 mg/lb twice renal toxicity or gastrointestinal ulceration in well controlled safety studies of up to ten times the dose in healthy dogs. daily course of therapy was repeated as needed at 2-week intervals in 244 dogs, some for as long as 5 years. Carprofen Tablets are not recommended for use in dogs with bleeding disorders (e.g., Von Willebrand's disease), as safety Clinical field studies were conducted in 297 dogs of different breeds undergoing orthopedic or soft tissue surgery. has not been established in dogs with these disorders. The safe use of Carprofen Tablets in animals less than 6 weeks of age, pregnant dogs, dogs used for breeding purposes, or in lactating bitches has not been established. Studies to (soft tissue surgery) or 3 days (orthopedic surgery). Carprofen tablets were well tolerated when used in conjunction with determine the activity of Carprofen Tablets when administered concomitantly with other protein-bound or similarly variety of anesthetic-related drugs. The type and severity of abnormal health observations in carprofen tablets- and metabolized drugs have not been conducted. Drug compatibility should be monitored closely in patients requiring placebo-treated animals were approximately equal and few in number (see Adverse Reactions). The most frequent additional therapy. Such drugs commonly used include cardiac, anticonvulsant and behavioral medications. It has been abnormal health observation was vomiting and was observed at approximately the same frequency in carprofen tablets suggested that treatment with carprofen may reduce the level of inhalant anesthetics needed.15 and placebo-treated animals. Changes in clinicopathologic indices of hematopoietic, renal, hepatic, and clotting function If additional pain medication is warranted after administration of the total daily dose of Carprofen Tablets, alternative were not clinically significant. The mean post-treatment serum ALT values were 7.3 III and 2.5 III less than pre-treatment. analgesia should be considered. The use of another NSAID is not recommended. Consider appropriate washout times values for dogs receiving carprofen tablets and placebo, respectively. The mean post-treatment AST values were 3.1 IU less when switching from one NSAID to another or when switching from corticosteroid use to NSAID use. for dogs receiving carprofen tablets and 0.2 IU greater for dogs receiving placebo. INFORMATION FOR DOG OWNERS: Carprofen Tablets, like other drugs of its class, are not free from adverse reactions. STORAGE: Store at 20°C to 25°C (68°F to 77°F). Owners should be advised of the potential for adverse reactions and be informed of the clinical signs associated with drug HOW SUPPLIED: Carprofen Tablets are scored, and contain 25 mg, 75 mg, or 100 mg of carprofen per caplet. intolerance. Adverse reactions may include decreased appetite, vomiting, diarrhea, dark or tarry stools, increased water I in bottles containing 30, 60, or 180 caplets onsumption, increased urination, pale gums due to anemia, yellowing of gums, skin or white of the eye due to jaundice, Carprofen Tablets 25 mg, 30 caplets lethargy, incoordination, seizure, or behavioral changes. Serious adverse reactions associated with this drug class can 25 mg, 60 caplets occur without warning and in rare situations result in death (see Adverse Reactions). Owners should be advised to Carprofen Tablets 25 mg, 180 caplets discontinue Carprofen Tablets therapy and contact their veterinarian immediately if signs of intolerance are Carprofen Tablets 75 mg, 30 caplets observed. The vast majority of patients with drug related adverse reactions have recovered when the signs are Carprofen Tablets 75 mg, 60 caplets Carprofen Tablets 75 mg, 180 caplets mportance of periodic follow up for all dogs during administration of any NSAID. Carprofen Tablets 100 mg, 30 caplets ADVERSE REACTIONS: During investigational studies of osteoarthritis with twice daily administration of 1 mg/lb, Carprofen Tablets 100 mg, 60 caplets no clinically significant adverse reactions were reported. Some clinical signs were observed during field studies (n=297) Carprofen Tablets 100 mg, 180 caplets which were similar for carprofen- and placebo-treated dogs. Incidences of the following were observed in both groups: REFERENCES: vomiting (4%), diarrhea (4%), changes in appetite (3%), lethargy (1.4%), behavioral changes (1%), and constipation (0.3%). 1. Baruth H, et al: In Anti-Inflammatory and Anti-Rheumatic Drugs, Vol. II, Newer Anti-Inflammatory Drugs, Rainsford KD The product vehicle served as control. ed. CRC Press, Boca Raton, pp. 33-47, 1986. There were no serious adverse events reported during clinical field studies of osteoarthritis with once daily administration of 2 mg/lb. The following categories of abnormal health observations were reported. The product vehicle served as control.  $2. \ Vane\ JR,\ Botting\ RM:\ Mechanism\ of\ action\ of\ anti-inflammatory\ drugs.\ \textit{Scand}\ J\ \textit{Rheumatol}\ 25:102,\ pp.\ 9-21.$ 3. Grossman CJ, Wiseman J, Lucas FS, et al: Inhibition of constitutive and inducible cyclooxygenase activity in human Percentage of Dogs with Abnormal Health Observations Report in Osteoarthritis Field Study (2 mg/lb once daily) latelets and mononuclear cells by NSAIDs and COX-2 inhibitors. *Inflammation Research* 44:253-257, 1995. 4. Ricketts AP, Lundy KM, Seibel SB: Evaluation of selective inhibition of canine cyclooxygenase 1 and 2 by carprofen and other nonsteroidal anti-inflammatory drugs. Am J Vet Res 59:11, pp. 1441-1446, November 1998. 5. Ceuppens JL, et al: Non-steroidal anti-inflammatory agents inhibit the synthesis of IgM rheumatoid factor in vitro. Behavior change  $6. \ Ceuppens \ JL, \textit{et al:} \ Endogenous \ prostagland in \ E_2 \ enhances \ polyclonal \ immunoglobulin \ production \ by \ ionically$ Dermatitis PU/PD SAP increase ALT increase AST increase BUN increase Bilirubinuria inhibiting T suppressor cell activity. Cell Immunol 70:41, 1982.  $7. \, \text{Schleimer RP}, \, \textit{et al:} \, \text{The effects of prostaglandin synthesis inhibition on the immune response}.$ Immunopharmacology 3:205, 1981. 8. Leung KH, et al: Modulation of the development of cell mediated immunity; possible roles of the products of cyclooxygenase and lipoxygenase pathways of arachidonic acid metabolism. Int J Immunopharmacology 4:195, 198 Veit BC: Immunoregulatory activity of cultured-induced suppressor macrophages. Cell Immunol 72:14, 1982. 10. Schmitt M, et al: Biopharmaceutical evaluation of carprofen following single intravenous, oral, and rectal doses in dogs. Clinical pathology parameters listed represent reports of increases from pre-treatment values; medical judgment is Biopharm Drug Dispos 11(7):585-94, 1990. necessary to determine clinical relevance 11. Kore AM: Toxicology of nonsteroidal anti-inflammatory drugs. Veterinary Clinics of North America, Small Animal During investigational studies of surgical pain for the tablet formulation, no clinically significant adverse reactions were Practice 20, March 1990. reported. The product vehicle served as control. 12. Binns SH: Pathogenesis and pathophysiology of ischemic injury in cases of acute renal failure. Compend for Cont Ed Percentage of Dogs with Abnormal Health Observations Reported in Surgical Pain Field Studies with Tablets (2 mg/lb once daily) 16:1, January 1994. 13. Boothe DM: Prostaglandins: Physiology and clinical implications. Compend for Cont Ed 6:11, November 1984. 14. Rubin SI: Nonsteroidal anti-inflammatory drugs, prostaglandins, and the kidney. JAVMA 188:9, May 1986. 15. Ko CH, Lange DN, Mandsager RE, et al: Effects of butorphanol and carprofen on the minimal alveolar concentration of Ocular disease isoflurane in dogs. JAVMA 217:1025-1028, 2000. To report suspected adverse drug events, for technical assistance or to obtain a copy of the Safety Data Sheet, contact Dysrhythmia Apnea Oral/periodontal disease Dechra at 1-866-933-2472. For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or http://www.fda.gov/reportanimalae Approved by FDA under ANADA # xxx-xxx

> Manufactured for: Dechra Veterinary Products 7015 College Boulevard, Suite 525 Overland Park, KS 66211 USA

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..Carprofen Tablets - US - Leaflet | Proof: | Date: Product: . 03-09-2020 03-09-2020 Dimensions: .7.75' x 18' ... 21pt - (Dog owner 24pt) Primary brand name font size: .. 17.85pt - (Dog owner 20.4pt) | 1.4 (NH) | 08-01-2021 | 1.5 (BB) | 11-02-2021 Established name Primary brand description font size: ....... 12.6pt - (Dog owner 14.4pt) Body text font size: .... .. 6pt - (Dog owner 9pt) Item code: ..Rev. January 2021 STYLE DEVIATIONS -Pantone reference guide Colours to be printed: Space has been left at the top as this is how the original artwork is. Header - ("car-prō-fen") has had to use the 'World' version of Helvetic BLACK CUTTER GUIDE TEXT AREA REGULATORY AUTHORITIES' REQUESTS -CUT MARKS GLUE PANEL REGISTRATION MARKS Dechra

Urinary tract disease

\* A single dog may have experienced more than one occurrence of an event.